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Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)

The Development of Operational,)
Technical and Spectrum Requirements)
Meeting Federal, State and Local)
Public Safety Agency Communication)
Requirements Through the Year 2010)

WT Docket No. 96-86

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FEDERAL COMMUNICATIONS COMMISSION
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Establishment of Rules and Requirements)
for Priority Access Service)

COMMENTS OF BELL ATLANTIC MOBILE, INC.

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Dated: December 19, 1997

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COMMENTS OF BELL ATLANTIC MOBILE, INC.

Bell Atlantic Mobile, Inc. (BAM), by its attorneys, hereby submits its initial comments on the Second Notice of Proposed Rulemaking in this proceeding (FCC 97-373, released October 24, 1997).

SUMMARY

Part III of the Second Notice seeks comment on whether the Commission should develop rules for a new "priority access service" to be offered by providers of commercial mobile radio services (CMRS). BAM is one of the nation's largest CMRS carriers, providing cellular radiotelephone service in nineteen states and the District of Columbia, and thus would be directly affected by the adoption of any priority access rules.

BAM opposes creation of this new regulatory regime. The record of this proceeding to date does not establish any need or reason for the Commission to

adopt a CMRS priority access system. In fact, recent developments are providing public safety agencies with ample and increasing options in the wireless market for meeting their communications needs. There is thus no rational basis for adopting any priority access program, mandatory or voluntary. A mandatory system cannot be justified under the Commission's own standards for new regulation. Attempting to legislate a "voluntary" system would be complex and controversial, and would create more public interest problems than it would address. The better course is to allow competitive forces in the wireless market to develop new technologies which eliminate all call blocking, while at the same time encouraging deployment of a nationwide public safety communications system, using the spectrum that Congress has recently designated for that purpose.

Early in the Second Notice (at ¶ 22), the Commission concluded, "[W]e believe that the competitive provision of public safety equipment and services will spur technological innovation, leading to enhanced capabilities for efficient spectrum use." That conclusion, which BAM supports, states precisely the reason why the Commission should not adopt priority access rules.

I. RECENT DEVELOPMENTS CONFIRM THAT PRIORITY ACCESS SERVICE RULES ARE NOT NEEDED.

Part III of the Second Notice addresses an October 1995 Petition for Rulemaking filed by the United States Department of Defense on behalf of the National Communications System ("NCS"). That petition requested the Commission to adopt rules which would enable federal, state and local law

enforcement and public safety agencies to obtain "priority access" to participating cellular systems. Priority users would be able to gain access to the next available cellular channel before other users in certain emergency or other situations.

In April 1996, the Commission sought comment on the NCS Petition. BAM and other parties pointed out at that time that public safety agencies already could obtain cellular service from carriers, that there was no need to create a distinct access service, and that adopting priority access rules would require resolution of complex technical and other issues. To the extent that public safety agencies had spectrum needs which were not being met by existing services, BAM urged the Commission to allocate additional frequencies for public safety use, rather than impose a new regulatory scheme on the cellular service.

Developments since the NCS Petition was filed confirm that there remains no reason for creating a priority access service. To the contrary, 1996 and 1997 saw numerous developments which provide public safety agencies with even more options for meeting their communications needs than they had when NCS filed its Petition. Given these developments, the right course here is to end further consideration of a new government access regime.

1. There is No Evidence that Agencies' Access to CMRS is Impaired. The record in this proceeding to date does not supply any factual basis for considering a priority access service. NCS's Petition identified only a few situations where one local cellular network was briefly overloaded. But there is no recent evidence that this has been a recurrent problem or could be a problem in the future, particularly

given the significant expansion of CMRS systems and network capacity discussed below.¹ Without hard new information showing that public safety agencies have been unable to place calls, and that this problem in fact resulted from subscriber usage levels, rather than other reasons, the Commission should not consider new rules.² The only hard information that does exist shows that public safety agencies already have a wide range of ways to meet their communications needs.

2. CMRS Carriers Already Provide Significant Assistance to Public Safety Agencies. Wireless carriers are providing support to federal, state and local public safety agencies in many ways which show that the market is responding to those agencies' communications needs. BAM is committed to assisting law enforcement and emergency services agencies, and already devotes substantial resources to that effort. For example, BAM has provided cellular equipment and

¹The few examples NCS cited may have resulted from multiple subscribers attempting to dial "911." If this is the situation that NCS wants changed through priority access, the result would be to give agencies priority over CMRS subscribers' own emergency calls. Such impairment of subscribers' access to 911 would not only create its own public policy problems, but would conflict with the Commission's recent actions requiring carriers to expand their 911 services to non-subscribers. As discussed at pages 10-11 below, this conflict is yet another reason not to adopt priority access rules.

²Public safety agency subscribers may not be able to place wireless calls for many reasons that would not be solved by a priority access system. Calls may not go through, for example, because of line-of-site problems caused by buildings or hilly terrain, or because of lack of coverage. When TWA Flight 800 crashed off Long Island, the problem was not inability to gain access, but the lack of coverage in that shoreline area. BAM immediately addressed that problem by bringing in a "cell cite on wheels" to provide service. The point is that the presence of priority access makes no difference if there is limited or no coverage in the area involved in the emergency.

airtime usage in response to requests by public safety and emergency response teams following natural disasters and in other emergency situations.³ BAM has supplied cellular service to public agencies at conventions and events involving large crowds and security issues (such as inaugurations) which place increased demands on the communications needs of these agencies.

BAM has also entered into numerous agreements with state and local police departments to provide them with Cellular Digital Packet Data (CDPD) capability, which enables police vehicles to communicate instantly with public safety databases using transmissions over cellular spectrum. This fast-growing service, now used by the New Jersey State Police, the Philadelphia Police Department, and others, enables law enforcement personnel to make on-the-spot verifications of driver license and automobile registrations, and to obtain immediate information about a suspect. In addition to greatly improving emergency communications services, this technology also frees up public agency communications systems so that they can be used for voice traffic. This use of state-of-the-art wireless technology is one way in which public safety agencies can establish arrangements that relieve overloaded public safety communications. Articles from law

³BAM provided a "cell site on wheels," cellular phones, and airtime to the FBI, the NTSB, and other law enforcement and safety agencies involved in the TWA Flight 800 crash off Long Island in August 1996. BAM is not aware of concerns by those officials that they were not able to make cellular calls in connection with the accident and the subsequent investigation. BAM also provided significant cellular resources to government agencies in connection with Hurricane Fran when it came ashore in South Carolina in 1995. Again, BAM is not aware that public safety agencies were not able to obtain sufficient cellular access in that disaster.

enforcement and other publications on the benefits of this wireless service are provided in Attachment 1 to these Comments.

3. *Significant New Public Safety Spectrum Is Being Allocated.* In the Balanced Budget Act of 1997, Congress committed a substantial block of spectrum in the 746-806 mhz band, a total of 24 mhz, and reserved it for public safety use. The Commission was delegated the responsibility to ensure that this spectrum was allocated and licensed promptly and efficiently. Most of the Second Notice is devoted to this important project. Focusing on how best to use this new spectrum will enable the public safety community to develop compatible equipment and networks, thereby addressing one of the principal problems today, the inability of different federal, state and local emergency personnel to communicate together. Utilization of new spectrum, coupled with the use of existing spectrum, removes any basis for priority access rules.

4. *Public Safety Agencies Have Many Options for Purchasing CMRS.* 1996 and 1997 saw the completion of spectrum auctions which resulted in the issuance of thousands of new licenses to provide PCS, SMR and other wireless services. The auctions added an additional 120 mhz of "Personal Communications Service" spectrum to the 50 mhz of cellular spectrum that was already available for mobile voice and data communications, and most of that new spectrum is now in service or will soon be deployed. This development is already providing public safety agencies and other subscribers with features and capabilities that are comparable to what cellular carriers provide. Still further spectrum has been

licensed for enhanced, wide-area SMR. Public safety agencies now have as many as six vendors of wireless service to purchase from, further indicating that market forces will allow them to meet their needs, without priority access rules.

5. Cellular Capacity Has Increased. Cellular carriers themselves have significantly enhanced the capacity of their systems in two ways. First, they have constructed hundreds of additional cell sites, particularly where existing sites were overloaded, to prevent call blocking. Second, they have invested millions of additional dollars in new digital technologies -- GSM, CDMA and TDMA -- which utilize spectrum more efficiently than analog cellular technology. Digital systems increase capacity by enabling wireless carriers to handle many more simultaneous calls than with analog systems. These developments greatly reduce the potential for blocked calls, because even in emergency situations, wireless systems are able to handle much greater peak loads.

II. ADOPTING PRIORITY ACCESS SERVICE RULES WOULD BE LEGALLY UNJUSTIFIED.

Given the lack of information in the record to date as to the need for priority access service, and the many developments noted above which are supplying much more CMRS and other spectrum capacity to meet public safety demands, the Commission cannot meet the legal standard for imposing new priority access rules. In the Omnibus Budget Act of 1993, Congress enacted a new deregulatory approach to wireless services which relied on competition, through licensing of new service providers and other actions, rather than on regulation, to

promote the public interest. The Commission implemented Congress' direction by repeatedly finding that market forces should govern the development of CMRS,⁴ and that it should not impose new rules on CMRS providers absent a compelling need.⁵ No need, let alone the requisite compelling need, has been shown here. BAM's experience shows that the market is responding to demands from public safety agencies as well as other customers for new features and capabilities, by increasing capacity and deploying new technologies.

Were the Commission to adopt priority access rules, that action would also potentially undermine Congress' goal in allocating new public safety spectrum. It could encourage public safety agencies to increase their reliance on commercial spectrum, rather than the new 24 mhz of spectrum that Congress has specifically earmarked for public safety communications needs. The Commission should encourage the efficient licensing and utilization of that 24 mhz of spectrum, and most of the Second Notice is intended to do just that. By continuing to consider

⁴See, e.g., Implementation of Sections 3(n) and 332 of the Communications Act, 9 FCC Rcd 7988, 8004 (1994) (actions taken in this rulemaking are essential step "toward achieving the overarching congressional goal of promoting opportunities for economic forces -- not regulation -- to shape the development of the CMRS market."

⁵E.g., Petition of the Connecticut Dep't of Public Utility Control to Retain Regulatory Control of the Rates of Wholesale Cellular Service Providers, 10 FCC Rcd. 7025, 7035 (1994) (Section 332 of the Communications Act, as amended in 1993, warrants imposing new requirements on CMRS providers only where there is a "clear cut need" for doing so); Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services, 11 FCC Rcd 18455, 18463 ("all regulation necessarily implicates costs, including administrative costs, which should not be imposed unless clearly warranted.").

priority access, however, the Commission will only delay the productive use of the new spectrum specifically set aside for public safety use, thereby undermining Congress's goals in setting aside that spectrum.

BAM is particularly concerned that the Second Notice (at ¶ 210) raises the issue of whether priority access should be made a mandatory service. Even NCS, the party which sought priority access, advised the Commission that it should not be mandatory. BAM is at a loss to understand why the Second Notice embarks down this road at all, and strenuously opposes it.

III. PRIORITY ACCESS CANNOT BE CONSIDERED UNTIL THE COMMISSION FIRST RESOLVES NUMEROUS COMPLEX ISSUES.

Even if the Commission decides to consider priority access only as a voluntary arrangement, adopting rules would still be ill-advised, given the many complex issues that must first be resolved. The Commission is committed to complete the allocation of the 24 mhz of public safety spectrum and begin assigning licenses by September 30, 1998 (Second Notice at ¶ 2). That is the priority. CMRS priority access service is not. The Commission should devote whatever resources it has available for this proceeding to completing prompt licensing of the new 24 mhz band, not dilute those resources by legislating unnecessary priority access rules. The complex issue that would have to be solved before a meaningful priority access system could be put in place underscores why that effort would be inappropriate.

1. Problems of Setting "Priority Levels." An immediate practical obstacle occurs because the Commission would have to decide what "priority levels" to set, which agencies qualify for which priority levels, and how carriers are to implement that complex regime. The Second Notice (at ¶ 190) touches only briefly on this issue, but it underscores why adopting rules would be inadvisable. On the one hand, rules would be pointless unless they are generic and consistent on a national basis, advising carriers and agencies as to who has priority and in what order. On the other hand, such rules would be exceedingly difficult to craft. That effort would produce inevitable tensions between different government levels -- federal, state, county and local -- as well as tensions between different agencies at the same level -- for example, the FBI vs. the NTSB -- that the Commission will have to reconcile.

Even if those issues could be addressed, the result may well risk harm to the public. For every disaster or emergency situation is different, requiring different public safety personnel and resources. In some cases, federal agencies take the lead in any on-site relief effort or investigation. In others, local police and fire departments take the lead. Some situations (such as the Oklahoma City bombing) result from crimes; others (such as hurricanes and tornadoes) do not; still others (such as the TWA 800 crash) do not clearly fall into either category. It is simply impossible for the Commission to determine, in the form of generic rules, which agencies should take priority over which other agencies. Indeed, imposing that priority system could impair the proper prioritizing of

communications in the event of a local disaster or emergency.

Moreover, many localities have already adopted comprehensive local disaster situation plans that determine communications priorities, tailored to the particular public safety resources available in that community. Any national priority access system would have to be reconciled with those local plans. It is far better to allow the agencies involved to work together on a common communications arrangement in each state or community that reflects the inevitably unique considerations in every such situation.

2. Conflict With 911 Policies. The Second Notice (at ¶ 206) mentions in passing, but does not confront, the obvious tension between granting certain agencies priority over non-priority users, and carriers' obligations to transmit all calls placed to 911 numbers. The Commission has recently imposed detailed mandatory obligations on CMRS providers to provide 911 service.⁶ These rules are premised on the fundamental finding that it is in the public interest for all 911 calls -- whether validated or not validated, whether from subscribers or non-subscribers -- to be transmitted immediately.⁷ In a disaster or emergency, 911 calls are common. If a priority access system involves blocking of subscriber

⁶Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, FCC 97-402 (adopted December 1, 1997).

⁷"The FCC . . . pointed out that requiring wireless carriers to transmit all 911 calls to PSAPs will advance the public safety goals established in the Communications Act." Public Notice, FCC Requires Wireless Carriers to Forward All 911 Calls," Report WT 97-43, released December 1, 1997.

emergency calls to 911, then those calls may not go through. This would conflict with the Commission's 911 policies. But if 911 calls are given priority access, then the purported benefits of a priority access system would not materialize. Calls could be blocked. The Second Notice (at ¶ 193) acknowledges this serious problem. The Commission cannot proceed with priority access until it reconciles that effort with its own 911 policies and rules.

3. *Liability Issues Must Be Resolved.* Commenters on the NCS Petition urged the Commission to address indemnification of wireless carriers which participate in a priority access system, raising significant concerns that, without such indemnification, carriers could be subject to liability when, for example, they fail to transmit other calls.⁸ The Second Notice does not grapple with this important issue. Without indemnification from liability, carriers will be less likely to offer the service.⁹ Indemnification is a continuing problem as FCC continues to impose on carriers additional obligations that add cost and create legal exposure, without allowing them to be protected from liability.

⁸See, e.g., Comments of GTE Mobilnet, WT Docket No. 96-86, filed June 17, 1996, at 5-6; Comments of BellSouth Corporation, WT Docket No. 96-86, filed June 17, 1996, at 9-10.

⁹The Second Notice (at ¶ 206) discusses shielding carriers from liability under Section 202(a), which generally prohibits unreasonable discrimination by common carriers. But Section 201(b) has been interpreted to permit carriers to have offerings for government subscribers which are not available to non-government subscribers without violating Section 202(a). This should make concerns about Section 202(a) much less significant. The proper focus should be on the broader liability issue discussed above, not merely Section 202(a) liability.

3. Technical Obstacles Also Exist, and Preclude Achieving the Goal of Regulatory Parity. The Second Notice (at ¶ 214) refers to information suggesting that the only priority access technology currently available, the Priority Access Channel Assignment (PACA) standard, is not practicable for all wireless systems. BAM agrees. PACA is not compatible with the networks of all CMRS providers. For example, it will not work with the CDMA digital technology which BAM is deploying throughout its footprint. The Commission should not proceed with a service that is dependent on one technology, particularly where, as here, all competing carriers cannot utilize that technology. The Second Notice (at ¶ 224) correctly observes that any priority access rules should apply to all CMRS carriers, in order to comply with the Commission's important policy of "regulatory parity" among competing providers. That goal cannot, however, be met here, because PACA, the only present access technology, is not compatible with all CMRS systems.

The better course is to allow competitive forces in the wireless industry to develop new services and technologies that eliminate all call blocking. At the same time, the Commission should implement Congress' mandate to promote the development of a new public safety service using the new 24 mhz that Congress has specifically designated for that purpose. In the part of the Second Notice addressing the allocation of those frequencies, the Commission stated:

Efficient use of public safety spectrum in our view, can be fostered through the operation of competitive forces in markets supplying public safety communications equipment and services. As we have noted, we believe that the competitive provision of public safety

equipment and services will spur technological innovation, leading to enhanced capabilities for efficient spectrum use.

Second Notice at ¶22. That same approach clearly counsels not adopting priority access rules.

CONCLUSION

BAM urges the Commission to end its consideration of priority access rules, and focus its efforts on completing the prompt licensing of the new public safety spectrum. Public safety agencies who wish to use commercial spectrum in lieu of or in addition to that substantial new spectrum are able to do so. There is no rational basis to adopt a new federal regime regulating access.

Respectfully submitted,

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Dated: December 19, 1997

Bridgewater Police Harness the Power of Wireless Data

By Captain Robert Szkodny, Bridgewater Township Police Department, New Jersey

Fvery law enforcement officer knows what it feels like to pull over a car for speeding or a broken taillight and wonder who is behind the wheel. Police officers must be prepared for anything, from an apologetic teenager out for a spin to a dangerous criminal on the run.

The 64 sworn officers in Bridgewater Township, New Jersey, feel safer doing their jobs these days thanks to wireless technology, customized software and laptop computers that give them critical information about vehicles and drivers in as few as three seconds, before they set foot outside their patrol cars.

Mobile data terminals (MDTs) in police cruisers are nothing new, of course. Many big-city police departments have been using them for years. What is new is the Cellular Digital Packet Data (CDPD) technology that brings the advantages of MDTs within reach of a department the size of Bridgewater's.

We began our MDT project by exploring two options to provide reliable mobile data communications within the 33-square-mile township. The first question was whether we wanted to communicate using our existing radio system or a cellular network. Research clearly indicated that the radio system option carried a number of drawbacks. We would need to purchase additional radios and upgrade existing towers. There would be ongoing expenses for new equipment, upgrades and regular maintenance. Finally, projected start-up costs greatly exceeded the funds allocated for the project.

We found that using a cellular network presented the best, most cost-effective alternative. Since the cellular infrastructure that allows data transmission using CDPD technology already existed and was maintained by cellular service providers, we would not have to expand our present radio system to make MDTs a reality. There would be no towers to construct and no continual maintenance expenses. Airtime costs would be fixed on a "per car, per month" basis, greatly simplifying the budgeting process.

In addition, Massachusetts-based Cerulean Technology's PacketCluster Patrol™ provided a software solution allowing MDTs to interface with our existing "Computerized On-Line Police System" (COPS)—a primary requirement of the project.

Once the decision was made, we were up and running in less than two months. By September 1995, we were ready to go.

Today, each of our 15 patrol cars has an MDT that uses the Air-Bridge CDPD from Bell Atlantic NYNEX Mobile to connect with the New Jersey Department of Motor Vehicles (DMV), the State Crime Information Center (SCIC), the National Crime Information Center (NCIC), Bridgewater's own COPS computer-aided dispatch (CAD), and the department's in-house warrant systems and records bureau database. Now, our officers begin gathering information as soon as they stop a vehicle by entering the license plate number into their MDTs.

Inquiries that used to take up to 10 minutes by radio now take fewer than 10 seconds. An officer in Bridgewater can determine the name of the registered owner, as well as whether or not the vehicle is wanted and if the registered owner's driver's license and registration privileges are valid. He can also search the department's COPS warrant system for any traffic warrants and conduct an SCIC/NCIC wanted-person inquiry—all before approaching the stopped vehicle.

If nothing suspicious results from the preliminary inquiries, the officer will approach the vehicle to ask for the driver's license and registration. With this information, he can run another swift check on the driver via the MDT. Even if the driver cannot produce a license or registration, the system is versatile enough to allow the officer to access state and national databases using the driver's name, address and date of birth. If there's no license plate on the vehicle, the officer can make a vehicle inquiry using only

the vehicle identification number.

Best of all, the information obtained via the CDPD system is real-time. As soon as driver, vehicle or wanted-person information is entered into DMV, SCIC or NCIC databases, it's available to our officers.

In addition to enhancing officer safety, the MDTs make Bridge-

*There have been
a number of
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the mobile data
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partment in ways
we never imagined.*

water Township's streets safer by helping us crack down on persistent traffic violators. With a few keystrokes, officers can access our COPS warrant system to determine if the driver is wanted locally for a traffic offense.

The MDTs are helping us take a record number of drivers with revoked or suspended licenses off the road before they cause more trouble. Statistics show that since we've begun using MDTs, we've doubled our arrest rate for revoked driver's license violators.

We have had a number of situations in which the MDTs have benefited the department and the community in ways we never imagined. For example, shortly after the system was implemented, one of our officers responded to an accident scene where an elderly man had crashed his car into a telephone pole. When the officer made DMV inquiries, he learned that the man had disappeared less than 24 hours earlier and was listed as an endangered missing person suffering from Alzheimer's disease. Within a few seconds, we knew the man's identity, were able to notify the authority that issued the missing-person alarm and had arranged to return him to his family.

The system is also a big hit with our dispatchers. They love the fact that they are now free from time-consuming DMV and SCIC/NCIC inquiries, and can concentrate on their dispatching responsibilities.

Another major benefit of the CDPD system is confidentiality. Unlike a radio system, the CDPD system is totally secure. Messages are encrypted to prevent unauthorized reception by scanners. In the past, our officers searched for pay phones when confidential conversations were necessary. Now, they can talk with each other and the communications desk without risk of interception.


Communications personnel can also dispatch officers electronically via their MDTs, much like an electronic mail system. An audible tone alerts the officer to the incoming message. Calls for service and unit status are displayed on each MDT screen, and information is continually updated.

The benefit of secure communications was demonstrated in a recent incident involving a suicidal woman who dialed 9-1-1. She threatened to harm herself if an officer was dispatched to her home. The dispatcher was familiar with the caller and aware that she had police scanners in her residence. Using the "voiceless" dispatch feature of the MDT system, the dispatcher alerted all patrol units. Patrol officers responded to the immediate area while the dispatcher continued talking to the caller, simultaneously relaying critical information to the responding units via the MDTs. Since the officers didn't use radios, the caller was never aware that they were on the way. However, once she was informed that officers were nearby to assist her, the caller allowed them into the house.

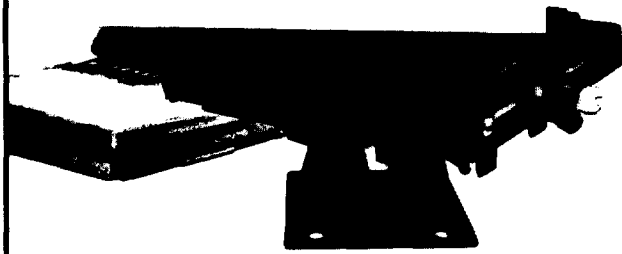
Bridgewater's new CDPD-based system promises even more benefits when we consider potential administrative savings. In the near future, we hope to enhance our software with a real-time report-writing package that will allow officers to file reports directly from the scene of an incident, making them available to supervisors and other officers instantly, rather than at the end of a work shift. We estimate the increased efficiency from this package will help us save as many as 15 man-hours each day. Time now being spent on paperwork can then be devoted to the community.

Having spent two years using the AirBridge CDPD system, it's hard to imagine doing police work without it. Bell Atlantic NYNEX Mobile has given us a wireless data communications tool, tailored to our specific needs, to allow us to deliver more effective law enforcement while making the most efficient use of our officers' time. And, more important, we feel our system has greatly increased our officers' personal safety. Our MDTs and the crucial information they supply are as much a part of our officers' safety equipment as their weapons and bulletproof vests. We are convinced that the individual benefits to our officers and the broader benefits to our community are well worth the monthly operating costs. ♦

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High-Tech, Crime-Fighting Solutions 'On Patrol' in Alexandria, Virginia

POLICE in Alexandria, Virginia, might be unique in how they use their CDPD laptop computers – they can remove them from their cruisers and take them right to the scene of the crime. And, they recently demonstrated how photos can be transmitted from headquarters to those laptops. The system might soon be able to do much more, too.



Alexandria Police Officer Jay Henry Williams holds one of the CDPD laptops that can be removed from the vehicle and taken to a crime scene inside a building to record all the pertinent information.

Using a scanner in a specially equipped cruiser in College Station, Texas, a photo of a missing child was transferred from the CDPD-equipped cruiser to a similarly equipped cruiser in Alexandria, Virginia. The entire photo transmission took about 60 seconds.

The system gives the 125 laptop-equipped police vehicles wireless access to critical data in the Virginia Criminal Information Network, the Virginia Division of Motor Vehicles and the National Crime Information Center (NCIC). And it provides "silent" car-to-car communications via email.

Shortly after the system was up, it proved itself a valuable crime-fighting tool.

According to Tom Steele, Alexandria's commander of automated systems, "Normally when the officers are out on patrol, they would have to call communications and then wait for a tag or driver's license to run. One of the officers who was driving down the street saw a suspicious car, ran the tag on it through the CDPD system, and it turned out to be an individual who was wanted by the Immigration and Naturalization Service who had a warrant for his extradition out of the country.

"(The officer) was able to have that individual turned over to an INS agent, and the person was on an airplane back home to South America within six hours."

The capability of removing the laptop from the cruiser and carrying it into a building where there is a crime scene can save valuable time and money.

Steele said, "We had a case where on the 11th floor of a building we found a number of weapons. Rather than writing down the serial numbers and then calling them into our communications center where they would have to key them in and then send them down to NCIC to check out whether they were stolen or missing, we were able to go up there with our laptops, key them in right there using CDPD and send them directly into the state and into NCIC.

"So, no one had to write anything

The Bell Atlantic Mobile CDPD system gives the department access to critical data and provides "silent" car-to-car communication via email. Each unit has a keyboard light, a hard-environment case and a pen that has mouse and on-screen writing capabilities.



down or be inconvenienced. We accomplished in minutes what would have taken a day to do."

The department recently has been pushing the envelope to try new and innovative uses of CDPD technology. In conjunction with the International Association of Chiefs of Police (IAC) and the U.S. Department of Transportation, they recently used CDPD technology to demonstrate how photographs can be transmitted to and between police cruisers, giving officers an immediate view of a missing person or a wanted suspect.

"We knew that data exchange worked well," Steele said, "so we decided to put

the emphasis on how the technology is beneficial to the community beyond criminal activity."

The photo transfer capability is part of a package of data base access services being developed by the Texas Transportation Institute called ALERT (Advanced Law Enforcement & Response Technology) that will allow police departments to share information from various state, local and federal crime data bases. Using a scanner in an ALERT car from College Station, Texas, a photograph of a missing child was transferred from the CDPD-

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Alexandria Police Officer Tim Kyburz with one of the department's laptops in a cruiser.

From Page 61

equipped cruiser to a similarly equipped car in Alexandria, Virginia. The entire photo transmission took about 60 seconds. And, the system might soon be able to do much more than handle photo transfers. "When the Center for Missing and Exploited Children gets a photo of a child who's been reported as abducted or missing, they like to have the latitude and longitude of where the child was abducted from," Steele said. "With this information, the center can locate all the police departments within a certain radius of that point.

Eventually, they could electronically transfer a flyer on a missing child directly to the laptops of officers in the area so they can begin searching for the individual.

"This proved the concept that all this money the government is spending on

tivity through technology. Because of its efforts and experience with the system, Alexandria was the first department selected by the FBI to test the new NCIC 2000 system capabilities over CDPD for the FBI.

"We will continue to be on the cutting edge with new systems and capabilities," Steele said. "We hope that it can continue to grow and enrich the law enforcement community."

This article was submitted by Maggie Aloia Rohr, staff director-public relations, of Bell Atlantic NYNEX Mobile, which also supplied the photos. ▲.

Because of the department's efforts and experience with the system, Alexandria was the first department selected by the FBI to test the new NCIC 2000 system capabilities over CDPD for the FBI.

buying equipment for local law enforcement agencies has a value beyond catching criminals."

The department is dedicated to increasing its effectiveness and produc-

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Mobile Computing

Cellular Digital Packet Data Helps Improve Efficiency

By Erik Edenholm

APCO Bulletin
Assistant Editor

CELLULAR Digital Packet Data (CDPD) is proving itself to be an inexpensive, effective way to transmit information to law enforcement officers in the field using cellular networks or public safety radio systems.

Police in Somerville, New Jersey, have been using CDPD since January.

"Using CDPD technology, our officers can obtain basic information on a vehicle in seconds simply by typing a car's license plate number into a laptop computer," Somerville Police Lt. Richard Rose said.

CDPD computer software developed by Cerulean Technology Inc. of Marlborough, Massachusetts, is able to detect and use unused airtime on public safety radio networks and cellular networks by packaging data and sending it in short bursts during idle time between voice transmissions.

Lt. Rose said Somerville has 35 police officers using the system to send messages from car to car and to dispatch. But the main reason for which the officers use the system is to search law enforcement databases.

"During routine patrol, our officers can type in a license plate number whenever they have reason to feel suspicious," Rose said.

"For example, our officers often find stolen vehicles in parking lots of motels and hotels during the night shift."

Public safety agencies are using the technology because it can be used without building new radio networks or adding frequencies to existing networks.

"My original intent in developing a mobile data system was to get more radio frequencies and transmit using our system,

but the up-front costs far exceeded the costs for CDPD," Lt. Rose said.

Instead, Rose chose to use a Bell Atlantic NYNEX, a commercial cellular carrier.

Many agencies are using CDPD because it can be implemented for less than using dedicated frequencies on public safety radio systems. "The more I looked at doing RF, the costs became more prohibitive," Rose said. In addition to installing new equipment and maintenance, the department would have had to apply for additional frequencies from the FCC.

"The money that was saved using CDPD enabled us to put computers in every car instead of only half," Rose said.

Inside cruisers, Somerville police are using 486DX/100 laptop computers instead of mobile data terminals. Rose said using laptops makes it possible to replace, repair or upgrade the computers more easily because parts and the computers can be found at local computer stores.

Having easier access to data has helped officers become more efficient. "Before we obtained this technology," Rose said, "we had to check driver's licenses and (the car's) plates through a dispatcher who usually was juggling three or four other calls at the time. That process

took several minutes, compared to the three to five seconds it takes using CDPD."

"That's pretty amazing when you consider that when an officer in a car hits the 'enter' key on the laptop, information is transferred to the modem through the antenna to the nearest cell site.

When it reaches a cell site, it



Somerville (New Jersey) Police Lt. Richard A. Rose and Bob Karnila, a data systems engineer with Bell Atlantic NYNEX Mobile.

Inside cruisers, Somerville police officers are using 486DX/100 laptop computers instead of mobile data terminals (MDTs). Lt. Rose said using laptops makes it possible to replace, repair or upgrade the computers more easily because parts and the computers can be found at local computer stores. Having easier access to data has helped officers become more efficient.

is then sent over wireline to the switching center in Jersey City, New Jersey, and then back via landline to our host computers."

"From our host computer, information is transferred to the state's computers in Trenton, New Jersey, and then to Washington, D.C., and Arizona to the National Crime Information Center."

Before Somerville police got the CDPD system, Rose said, he had to convince the town council that the system would help officers find drivers with suspended licenses and cars not properly registered.

"When I put this project together," he said, "I proposed to the town council that I would increase productivity on revokes by 100 percent for 1996."

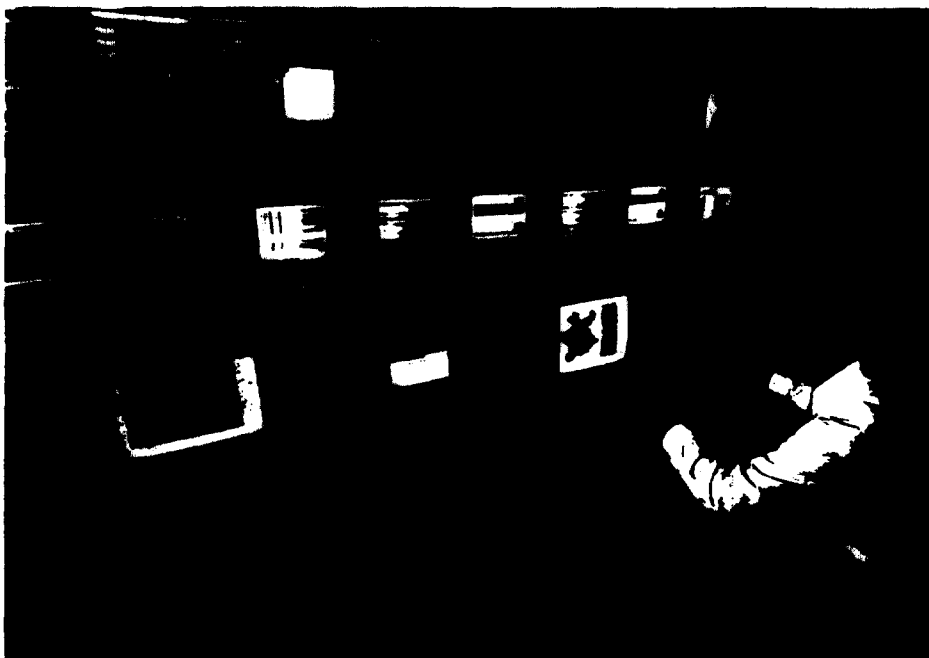
"We have already reached that goal (before September) and are expecting to achieve a 300 percent to 400 percent increase this year."

He said the increase in fines collected from finding drivers with expired licenses and tags will pay for the system this year.

When he was looking at ways to transmit information, Rose said, he thought one of the drawbacks to using CDPD would be having the recurring costs of using cellular networks.

Bell Atlantic NYNEX Mobile, the area's cellular provider, produced a different pricing plan for cellular digital packet data than voice transmissions.

"The user is only paying for the amount of data sent, not on the amount of airtime used," according to Maggie Aloia Rohr,



The Bell Atlantic NYNEX Mobile's Network Operations Control Center. This is where engineers monitor both the voice and data networks to ensure they are running smoothly all the time. The center's personnel keep watch 24 hours a day, seven days a week, 365 days a year.

Bell Atlantic NYNEX Mobile public relations staff director.

In addition to cost-savings, the department also now has a secure way to communicate. Messages carried by CDPD are encrypted to prevent unauthorized receptions.

"One of the benefits of using cellular

over RF," Rose said, "is that many times we send our cars out of the county, sometimes several counties away, to pick up prisoners. CDPD allows us to stay in contact when we are out of radio range."

"We hope to make CDPD as nationwide as possible" Rohr said. The cellular carrier has made agreements with several other carriers in 15 states and the District of Columbia.

Another reported benefit to agencies using cellular digital packet data over cellular networks is that the public safety agencies do not have to maintain the network. The Bell Atlantic NYNEX Mobile Network Operations Control Center (NOCC) monitors its network 24 hours a day, seven days a week. The center electronically monitors cell sites and mobile switching centers for fire alarms, intrusions and equipment failures.

When an alarm or sensor is triggered, information is sent to the operations control center, including cell location, switch location, phone numbers of commercial power, police and fire departments and directions to the cell site. The center also answers calls to the three-digit repair number for voice and data customers.

Lt. Rose said he wants to expand cellular digital packet data use to allow officers to write reports on laptops while on patrol and then send them to headquarters via the network. He also said he is working on a way to allow telecommunicators to dispatch cruisers by sending messages from the computer-aided dispatch system. ▲

Bell Atlantic NYNEX Mobile AirBridge® Packet Service Public Safety Application

